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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/444,723	11/24/1999	JEFFREY WOODING	100-42	9016

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EXAMINER

TAYLOR, BARRY W

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 02/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/444,723

Applicant(s)

WOODING, JEFFREY

Examiner

Barry W Taylor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in European Patent Office (EPO) on 5/22/1998. It is noted, however, that applicant has not filed a certified copy of the (EPO 98304101.3) application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 10-16, 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Emerson et al (5,553,059 hereinafter Emerson).

Regarding claims 1, 29. Emerson teaches an apparatus for remotely measuring characteristics of a communication line (entire disclosure) comprising:

receiving means (#32, #42, #12 fig. 1) for connecting to a remote end of the communications line;

sender means (#22 figure 1) for connecting to the other end of the communications line;

the receiver means (#32, #42, #12 fig. 1) generating a signal in response to a selection of one of a plurality of characteristics of the line to be measured (Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65);

the sender means having detection means (#34 figure 1) for detecting the signal, and switching means (see switching circuit for loop back and pattern generator for the two loop back control circuitries figure 2, Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65);

such that on detection of the signal, and on the basis of the unique representation of the signal, the switching means is controlled to connect predetermined circuitry across the line at the other end and at the remote end to enable a selected characteristic of the line to be measured (see switching circuit for loop back and pattern generator for the two loop back control circuitries figure 2, Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65).

Regarding claims 2, 30. Emerson teaches the signal is generated by signal generation means and is assigned a unique code such that the unique code is representative of a characteristic of the line to be measured (col. 1 lines 64-67, col. 2 lines 6-46, col. 3 lines 36-38, col. 3 line 66 – col. 4 line 67, col. 5 lines 1-66, col. 6 lines 27-67, col. 7 lines 1-65).

Regarding claim 3. Emerson teaches the apparatus wherein the signal assigned a unique code is represented by a sequence of pulses (col. 3 lines 53-65, col. 4 lines 6-30, col. 5 lines 17-66, columns 6-12).

Regarding claim 4. Emerson teaches the apparatus wherein on detection by the detection means of the signal, the signal is converted into a digital code (col. 3 lines 53-65, col. 4 lines 6-30, col. 5 lines 17-66, columns 6-12).

Regarding claim 5. Emerson teaches the apparatus further comprising processor means for receiving and processing the digital code representation of the signal (col. 3 lines 53-65, col. 4 lines 6-30, col. 5 lines 17-66, columns 6-12).

Regarding claim 6. Emerson teaches the apparatus wherein the switching means is controlled by the processor means to connect the predetermined circuitry on the basis of the particular code received and processed by the processor means (see switching circuit for loop back and pattern generator for the two loop back control circuitries figure 2, Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65).

Method claims 10-16 are rejected for the same reasons as apparatus claims 1-6 since the recited elements would perform the claimed steps.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7-8, 17-18, 19-28, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emerson et al (5,553,059 hereinafter Emerson) in view of Barton et al (5,343,461 hereinafter Barton).

Regarding claims 7-8, 17-18. Emerson does not explicitly show using buttons. However, Emerson shows using the well-known command sequence to trigger a pattern generator (column 5). Emerson even provides the option of which pattern is to be generated.

Barton discloses an old well-known method to facilitate performance monitoring that uses push-button to loop-up (i.e. activate) the interface so that a telephony company may localize suspect faults on the communication line (Title, abstract, column 37).

Therefore, it would have been obvious for any one of ordinary skill in the art at the time the invention was made to modify the apparatus as taught by Emerson to use push-buttons as taught by Barton so that the test procedure may be activated by pressing a button.

Regarding claim 24. Emerson teaches an apparatus testing a communications line so as to ascertain and measure a plurality of characteristics of the line, the apparatus comprising:

receiving means (#32, #42, #12 fig. 1) for connecting to a remote end of the communications line;

sender means (#22 figure 1) for connecting to the other end of the communications line;

the receiver means (#32, #42, #12 fig. 1) generating a signal in response to a selection of one of a plurality of characteristics of the line to be measured (Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65);

the sender means having detection means (#34 figure 1) for detecting the signal, and switching means (see switching circuit for loop back and pattern generator for the two loop back control circuitries figure 2, Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65);

the signal uniquely representation the selected characteristic ... (see switching circuit for loop back and pattern generator for the two loop back control circuitries figure 2, Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65).

detection means for detecting signal (Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65);

switching means for connecting the predetermined circuitry ... (Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65).

Emerson does not explicitly show using buttons. However, Emerson shows using the well-known command sequence to trigger a pattern generator (column 5). Emerson even provides the option of which pattern is to be generated.

Barton discloses an old well-known method to facilitate performance monitoring that uses push-button to loop-up (i.e. activate) the interface so that a telephony company may localize suspect faults on the communication line (Title, abstract, column 37).

Therefore, it would have been obvious for any one of ordinary skill in the art at the time the invention was made to modify the apparatus as taught by Emerson to use push-buttons as taught by Barton so that the test procedure may be activated by pressing a button.

Regarding claim 25. Emerson teaches the signal is generated by signal generation means and is assigned a unique code such that the unique code is representative of a characteristic of the line to be measured (col. 1 lines 64-67, col. 2 lines 6-46, col. 3 lines 36-38, col. 3 line 66 – col. 4 line 67, col. 5 lines 1-66, col. 6 lines 27-67, col. 7 lines 1-65).

Regarding claim 26. Emerson teaches the apparatus wherein the signal assigned a unique code is represented by a sequence of pulses (col. 3 lines 53-65, col. 4 lines 6-30, col. 5 lines 17-66, columns 6-12).

Regarding claim 27. Emerson teaches the apparatus further comprising processor means for receiving and processing the digital code representation of the signal (col. 3 lines 53-65, col. 4 lines 6-30, col. 5 lines 17-66, columns 6-12). Emerson

teaches the apparatus wherein the switching means is controlled by the processor means to connect the predetermined circuitry on the basis of the particular code received and processed by the processor means (see switching circuit for loop back and pattern generator for the two loop back control circuitries figure 2, Title, abstract, col. 1 lines 55-67, col. 2 lines 4-46, col. 3 lines 5-65, col. 4 lines 2-3, 21-67, col. 5 lines 1-67, col. 6 lines 2, 14-67, col. 7 lines 1-65).

Regarding claim 28. Emerson does not explicitly show using buttons. However, Emerson shows using the well-known command sequence to trigger a pattern generator (column 5). Emerson even provides the option of which pattern is to be generated.

Barton discloses an old well-known method to facilitate performance monitoring that uses push-button to loop-up (i.e. activate) the interface so that a telephony company may localize suspect faults on the communication line (Title, abstract, column 37).

Therefore, it would have been obvious for any one of ordinary skill in the art at the time the invention was made to modify the apparatus as taught by Emerson to use push-buttons as taught by Barton so that the test procedure may be activated by pressing a button.

Method claims 19-23 are rejected for the same reason as apparatus claims 24-28 since the recited apparatus would perform the claimed steps.

Regarding claim 31. Emerson does not explicitly show relays.

Barton discloses an old well-known method to facilitate performance monitoring that uses push-button to loop-up (i.e. activate) the interface so that a telephony

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company may localize suspect faults on the communication line (Title, abstract, column 37). Barton even discloses that the decoder is smart enough to recognize both loop-up and loop-down commands and acts accordingly via relays (column 18 line 7+).

Therefore, it would have been obvious for any one of ordinary skill in the art at the time the invention was made to modify the apparatus as taught by Emerson to use push-buttons as taught by Barton so that the test procedure may be activated by pressing a button causing corresponding relays to latch or unlatch the circuitry required for testing.

4. Claims 9 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emerson et al (5,553,059 hereinafter Emerson) in view of Bass (3,920,975).

Regarding claim 9. Emerson does not explicitly show a low frequency signal.

Bass teaches a remote test and control system that is compatible with any type of signaling system whether it be strictly polled wherein each remote is sequentially addressed or a multiplex arrangement, frequency or time domain, permitting more than one communication to take place simultaneously (column 5). Bass discloses using complex frequencies with a carrier frequency of 300 HZ and a data rate of 50 baud permits the command signals to be transmitted at a lower frequency avoiding interference between data and command signals (columns 1-16).

Therefore, it would have been obvious for any one of ordinary skill in the art at the time the invention was made to modify the apparatus as taught by Emerson to use

the frequency scheme as taught by Bass so that command signals may be transmitted at a lower frequency than data signals thus avoiding interface.

Regarding claims 32-33. Emerson discloses the capability to determine transmission problems on the telephone line but does not explicitly describe line loss.

Bass teaches a remote test and control system that is compatible with any type of signaling system whether it be strictly polled wherein each remote is sequentially addressed or a multiplex arrangement, frequency or time domain, permitting more than one communication to take place simultaneously (column 5). Bass discloses using complex frequencies with a carrier frequency of 300 HZ and a data rate of 50 baud permits the command signals to be transmitted at a lower frequency avoiding interference between data and command signals (columns 1-16). Bass discloses that it will be readily apparent to those skilled in the art that such characteristics as line loss, frequency response, envelope delay, etc., can be and are in fact measured in this fashion (column 6 line 46 – column 12 line 67).

Therefore, it would have been obvious for any one of ordinary skill in the art at the time the invention was made to modify the apparatus as taught by Emerson to use the frequency scheme as taught by Bass so that command signals may be transmitted at a lower frequency than data signals thus avoiding interface.

Conclusion

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The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2643.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 308-6306, (for formal communications intended for entry)

Or:

(703) 308-6296 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry Taylor whose telephone number is (703) 305-4811. The examiner can normally be reached on Monday-Friday from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6296.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700



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